



**INDIAN INSTITUTE OF SPACE SCIENCE AND TECHNOLOGY**  
(Declared as Deemed to be University under section 3 of the UGC act 1956)  
Government of India, Department of Space, Thiruvananthapuram – 695547

## **IIST Ph.D. Programme – January 2017 for Masters and Bachelors Degree holders**

Indian Institute of Space Science and Technology envisions basic and applied research for meeting the national R&D requirements of Science and Technology in general and the Indian Space Programme in particular. The institute provides a vibrant research atmosphere and offers doctoral and postdoctoral programmes.

**IIST has been ranked as 8th among the Indian Universities**, in the ‘National Institutional Ranking Framework (NIRF) – India Rankings 2016’ brought out by Department of Higher Education, Ministry of Human Resources Development, Government of India.

Applications are invited from highly motivated applicants for admission to the Ph.D. Programme starting in January 2017, in the areas of Aerospace Engineering, Avionics, Earth and Space Sciences, Mathematics, and Physics.

### **Eligibility**

#### **Minimum Qualifications:**

##### **1. Applicants with Master’s Degree in Engineering/Technology**

Applicants with Master’s Degree in Engineering/Technology must have secured first class or equivalent in the Master’s degree. **They must have pursued their Master’s degree on the basis of qualified GATE score.** Applicants with MS in Engineering or equivalent from leading foreign Universities with outstanding academic record or MS (by Research) with outstanding academic record can be considered without GATE score. Applicants with Integrated Masters degree (or Dual Degree) in Engineering/Technology from IITs and IISc with minimum CGPA 9.0/10 can also be considered without GATE score. Applicants who qualified UGC/CSIR/NET-JRF, with eligible degrees and meeting the above mentioned GATE score requirements, are particularly encouraged to apply.

## **2. Applicants with Master's Degree in Science**

Applicants must have Master's Degree in the relevant area with first class or equivalent in their Master's degree. They must have qualified UGC/CSIR NET-JRF/JEST (or) GATE in the relevant disciplines. Applicants applying with their JEST score should have secured a rank within the first 300.

## **3. Applicants with Bachelor's Degree in Engineering/Technology**

Outstanding applicants with Bachelor's degree in Engineering/Technology with an excellent academic record and aptitude for research may be considered for direct admission to the Ph.D. Programme. Such applicants must have secured CGPA of 9.0/10 or better and a valid GATE score of 675 or better. B.E./B.Tech students from IITs with CGPA better than 9.0/10 do not require GATE score.

**Age Limit:** Applicant should be below 28 years as on December 08, 2016. Age relaxation is applicable as per Government Rules.

**Nationality:** Applicant should be an Indian citizen.

Result awaited applicants in the final year/semester are also eligible to apply, if they have qualified for GATE/NET as required. Such applicants may be screened in for Test/Interview based on the marks obtained by them until the current year/semester. Based on their Test/Interview performance, these applicants may be provisionally selected subject to the condition that they have to produce the provisional certificate of obtaining the qualifying degree with required percentage of marks by the date stipulated in their provisional admission letter. If they fail to produce the provisional/ degree certificate by this date, their admission offer will be withdrawn and the offer may be given to next eligible applicant in the waiting list.

In exceptional cases, a provisionally selected applicant may be allowed to join IIST without submitting the provisional/degree certificate on the stipulated date of joining, subject to the conditions that (a) At the time of joining the applicant should have completed all the requirements for the award of the qualifying degree including all examinations, project works and viva voce (b) The applicant should produce at the time of joining, a Course Completion Certificate issued by the competent authority in the University/Institute specifically confirming that all examinations, project works and viva voce for the qualifying

degree are completed (c) If the above condition is satisfied, the applicant can be given provisional admission with the undertaking that all pending certificates, mark sheets, degree certificates (Original or Provisional) will be submitted to IIST , latest by 30th April 2017, failing which the admission stands cancelled. For such applicants who are provisionally admitted to the IIST Ph.D. Programme as per (c) above, no fellowship is paid during the period before the required certificates are submitted. However, on regularization of admission following the submission of all required documents before the stipulated date, the applicant will be paid fellowship with retrospective effect from the date of joining.

**Applicants who are employed in Government/Semi Government/PSUs/Autonomous Bodies should produce a “No Objection Certificate (NOC)” from the current employer at the time of Interview.**

<b>Research Areas for January 2017 PhD Admission</b>				
<b>Sl. No.</b>	<b>Department</b>	<b>Department code</b>	<b>Research Area</b>	<b>Eligibility</b>
1	Aerospace Engineering	AE/IIST/01	Precision machining/ Advanced Manufacturing	ME/MTech/MS in Manufacturing/ Production Engineering or equivalent streams with BE/BTech in Mechanical or equivalent branch.
2	Aerospace Engineering	AE/IIST/02	Compressible flow/ Gas Dynamics	ME/MTech/MS in Mechanical/Aerospace/ Aeronautical / Chemical Engineering or equivalent streams.
3	Aerospace Engineering	AE/IIST/03	Nonlinear Finite Element Formulations	ME/MTech/MS in Mechanical/ Aerospace/Civil Engineering or equivalent with any specialization related to Structural Design and Analysis or equivalent.
4	Aerospace Engineering	AE/IIST/04	Mechanics of Nanocomposites	ME/MTech/MS in Aerospace (Structures), Machine Design, Engineering Mechanics, Structural Engineering or equivalent branch.
5	Aerospace Engineering	AE/IIST/05	1. Large Eddy simulations of high speed flows 2. Computational Aeroacoustic 3. Magneto- Hydrodynamic Flow Control in high speed flows	ME/MTech/Dual Degree in Aerospace/ Mechanical Engineering or equivalent with background in Aerodynamics, Fluid Mechanics and CFD or equivalent.

Research Areas for January 2017 PhD Admission				
Sl. No.	Department	Department code	Research Area	Eligibility
6	Aerospace Engineering	AE/IIST/06	Structural Engineering	ME/MTech/MS in Structural Engineering/ Engineering Structures/Applied Mechanics/ Engineering Mechanics/ Aerospace (Structures)/ Machine Design or equivalent branch with BE/BTech in Civil/Mechanical/Aerospace/ Aeronautical Engineering or equivalent.
7	Avionics	AV/IIST/01	Power Electronics	ME/MTech in Power Electronics/ Power Systems/ Control Systems or equivalent with BE/BTech in Electrical and Electronics Engineering/ Electronics and Communication Engineering or equivalent.
8	Earth and Space Science	ESS/IIST/01 <b>[Three positions]</b>	Astronomy & Astrophysics	MSc/MS in Physics, Astronomy & Astrophysics/ B. Tech. in Engineering Physics, Physical Science/ BS-MS in Physics or equivalent.
9	Earth and Space Science	ESS/IIST/02	Remote Sensing	ME/MTech in Remote Sensing/ Remote Sensing and GIS/ Geoinformatics/Digital Image Processing/ Geographic Information or equivalent branch with courses in Remote Sensing.  <b>Note: Upon selection the scholar is expected to do intensive field survey and collect data from the mangrove forests.</b>
10	Mathematics	MA/IIST/01	Queueing Theory	MSc/ MS in Mathematics/Statistics or equivalent.
11	Mathematics	MA/IIST/02	Numerical Analysis	MSc/ MS in Mathematics or equivalent.
12	Physics	PH/IIST/01	Non-linear Dynamics	MSc /BS-MS in Physics, BTech (Engineering Physics) OR any equivalent degree.
13	Physics	PH/IIST/02	Device Physics and Nano-electronics	ME/MTech in Material Science/ Nanotechnology/Electronics OR MSc/BS-MS in Physics, BTech (Engineering Physics) OR any equivalent degree.

**RESEARCH FELLOWSHIP:**

- 1) Research Fellowship for GATE and UGC/CSIR NET-JRF/JEST qualified students is Rs.25,000/ - per month. (Research Scholars selected with UGC/CSIR NET-JRF shall draw fellowship from the concerned organisations.)
- 2) The fellowship will be enhanced based on a performance review after two years of Research.
- 3) The scholars will be required to assist the Departments in tutorials, practical training in labs or similar academic activities normally limited to 6 hours per week.
- 4) The scholars will have to pay fees and charges for the services provided by the Institute like boarding/lodging/medical facilities etc., as per IIST rules.

**SELECTION PROCEDURE:**

- 1) Applications will be received until **December 08, 2016** only through **on-line**.
- 2) From the eligible applicants, a short-listing will be done, taking into account their applicable GATE/NET scores. **Therefore applicants are advised to enter:**
  - i. **GATE score through which Master's Degree has been pursued;**
  - ii. **Best GATE score if the applicant possesses more than one GATE score.**
- 3) List of short-listed applicants for written test or interview will be displayed in IIST website by **December 21, 2016**.
- 4) Depending on the number of applicants who have applied, the final selection is based on an interview, which will be conducted at IIST, Thiruvananthapuram during **January 04 to 06, 2017**. **In case of very large number of applicants being shortlisted for Ph.D. admission, a written test will be conducted for shortlisted applicants for the interview.**
- 5) Selected applicants will be intimated within a week after the final interview. Results will also be displayed in the IIST website on **January 11, 2017**.
- 6) Outstation applicants will be reimbursed to and fro sleeper class train fare/bus fare by shortest route from the place mentioned in the application to Thiruvananthapuram, or actual fare paid (whichever is less) for attending the interview. The applicants are advised to make their own arrangements for their stay at Thiruvananthapuram, at their cost.

**HOW TO APPLY:**

- 1) Applications shall be submitted **online** at the IIST website [www.iist.ac.in](http://www.iist.ac.in). Applications received online only will be considered.
- 2) The applicants will not be allowed to make any changes in the profile registration once submitted. Hence utmost care should be taken by the applicant while filling the profile.
- 3) Application fee is to the extent of Rs. 250/- per Department (for SC/ST/PWD and Women applicants - Rs.125/- per Department). If the applicant is eligible and wishes to apply for more than one Research Area in a Department, he/she need not have to pay any additional application fee. However, such applicant who wishes to apply for more than one Research Area within the same Department need to indicate his/her choice of Research Areas in the order of his/her preference. The application fee is non-refundable.
- 4) All the applicants have to bring the Bank challan copy of the respective Department at the time of the interview as proof.
- 5) **Applicants who are employed in Government/Semi Government/PSUs/ Autonomous Bodies need to produce a “No Objection Certificate (NOC)” from the current employer at the time of Interview.**
- 6) SC/ST/OBC/Persons with Disabilities (PWD) applicants shall upload in the website, the relevant certificate before the prescribed date.

<b>IMPORTANT DATES</b>		
<b>Sl. No.</b>	<b>Event</b>	<b>Date</b>
1	Opening of IIST website for online submission of applications	25/11/2016 (16.00 hrs)
2	Opening date for Payment of application fee	29/11/2016
3	Closing date for online submission of applications	08/12/2016 (17.00 hrs)
4	Last Date for Payment of application fee and uploading the challan	14/12/2016
5	Tentative date of display of shortlisted applicants for written test or interview, in website	21/12/2016
6	Tentative Schedule of Interview	04/01/2017-06/01/2017
7	Tentative date for display of selected applicants (for admission) in IIST website	11/01/2017
8	Tentative date of reporting for all selected students	16/01/2017
9	Tentative date for commencement of classes	18/01/2017

**Advt.No.IIST/Admn/RMT/13/2016 dated 25.11.2016**